Learning to Fly: The Wright Brother's Adventure			
2008 Science			
Grade and Course Level Expectations			
Missouri Science Grade 6			
Activity/Lesson	State	Standards	
The Society	МО	SCI.6.7.1.A.e	Recognize different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects, organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)
The Society	MO	SCI.6.8.2.A.a	Describe how the contributions of scientists and inventors, representing different cultures, races, and gender, have contributed to science, technology and human activity (e.g., George Washington Carver, Thomas Edison, Thomas Jefferson, Isaac Newton, Marie Curie, Galileo, Albert Einstein, Mae Jemison, Edwin Hubble, Charles Darwin, Jonas Salk, Louis Pasteur, Jane Goodall, Tom Akers, John Wesley Powell, Rachel Carson)
Meet the Wrights	MO	SCI.6.8.2.A.a	Describe how the contributions of scientists and inventors, representing different cultures, races, and gender, have contributed to science, technology and human activity (e.g., George Washington Carver, Thomas Edison, Thomas Jefferson, Isaac Newton, Marie Curie, Galileo, Albert Einstein, Mae Jemison, Edwin Hubble, Charles Darwin, Jonas Salk, Louis Pasteur, Jane Goodall, Tom Akers, John Wesley Powell, Rachel Carson)
1901: The First Improvement	МО	SCI.6.7.1.A.b	Identify and describe the importance of the independent variable, dependent variables, control of constants, and multiple trials to the design of a valid experiment
1901: The First Improvement	МО	SCI.6.7.1.A.e	Recognize different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects, organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)

			Identify and describe the importance of the
			independent variable, dependent variables,
N. D.G.		0010744	control of constants, and multiple trials to the
New Data	MO	SCI.6.7.1.A.b	design of a valid experiment
			Recognize different kinds of questions
			suggest different kinds of scientific
			investigations (e.g., some involve observing
			and describing objects, organisms, or
			events; some involve collecting specimens;
			some involve experiments; some involve
			making observations in nature; some involve
			discovery of new objects and phenomena;
New Data	MO	SCI.6.7.1.A.e	some involve making models)
			data tables (allowing for the recording and
			analysis of data relevant to the experiment,
			such as independent and dependent
			variables, multiple trials, beginning and
			ending times or temperatures, derived
Now Data	MO	0010740 00	,
New Data	MO	SCI.6.7.1.D.a.3	quantities)
	1	- The Maintain	math and A decontrols
	Learning to Fig		rother's Adventure
		2008 Science	
	Grade an	d Course Level	Expectations
Missouri Science			
Grade 7			
Activity/Lesson	State	Standards	
			Recognize that different kinds of questions
			suggest different kinds of scientific
			investigations (e.g., some involve observing
			and describing objects organisms, or events;
			some involve collecting specimens; some
			involve experiments; some involve making
			observations in nature; some involve
			discovery of new objects and phenomena;
The Society	MO	SCI.7.7.1.A.e	some involve making models)
			come inverse maining medele,
			Describe how the contributions of scientists
			and inventors, representing different
			cultures, races, and gender, have
	1	1	contributed to science, technology and
			,
			human activity (e.g., George Washington
			human activity (e.g., George Washington Carver, Thomas Edison, Thomas Jefferson,
			human activity (e.g., George Washington Carver, Thomas Edison, Thomas Jefferson, Isaac Newton, Marie Curie, Galileo, Albert
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Meet the Wrights	МО	SCI.7.8.2.A.a	Describe how the contributions of scientists and inventors, representing different cultures, races, and gender, have contributed to science, technology and human activity (e.g., George Washington Carver, Thomas Edison, Thomas Jefferson, Isaac Newton, Marie Curie, Galileo, Albert Einstein, Mae Jemison, Edwin Hubble, Charles Darwin, Jonas Salk, Louis Pasteur, Jane Goodall, Tom Akers, John Wesley Powell, Rachel Carson)  Identify and describe the types of forces
			acting on an object in motion, at rest,
1901: The First Improvement	MO	SCI.7.2.2.A.a	floating/sinking (i.e., type of force, direction, amount of force in Newtons)
1901: The First	IVIO	001.7 .Z.Z.A.a	Compare the effects of balanced and unbalanced forces (including magnetic,
Improvement	MO	SCI.7.2.2.D.a	gravity, friction, push or pull) on an object's motion
1901: The First	MO	SCI.7.2.2.D.b	Explain that when forces (including magnetic, gravity, friction, push or pull) are balanced, objects are at rest or their motion remains constant
1901: The First			Explain that a change in motion is the result
Improvement	МО	SCI.7.2.2.D.c	of an unbalanced force acting upon an object
1901: The First	MO	SCI.7.2.2.D.d	Explain how the acceleration of a moving object is affected by the amount of net force applied and the mass of the object
1901: The First	MO	SCI.7.7.1.A.b	Identify and describe the importance of the independent variable, dependent variables, control of constants, and multiple trials to the design of a valid experiment
			Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve
1901: The First		001774	discovery of new objects and phenomena;
Improvement	MO	SCI.7.7.1.A.e	some involve making models)  Explain how simple machines affect the
Now Date	MO	0017005	amount of effort force, distance through which a force is applied, and/or direction of
New Data	MO	SCI.7.2.2.F.c	force while doing work  Identify and describe the importance of the
			independent variable, dependent variables, control of constants, and multiple trials to the
New Data	MO	SCI.7.7.1.A.b	design of a valid experiment

involve experiments; some in observations in nature; some discovery of new objects and some involve making models data tables (allowing for the analysis of data relevant to the such as independent and de	e involve d phenomena; s)
New Data  MO  SCI.7.7.1.A.e  discovery of new objects and some involve making models data tables (allowing for the analysis of data relevant to the some involve making models and tables).	d phenomena; s)
New Data  MO  SCI.7.7.1.A.e some involve making models data tables (allowing for the analysis of data relevant to the second sec	s)
data tables (allowing for the analysis of data relevant to t	
analysis of data relevant to t	recording and
	•
such as independent and de	•
· · · · · · · · · · · · · · · · · · ·	•
variables, multiple trials, beg	
ending times or temperature	s, derived
New Data MO SCI.7.7.1.D.a.3 quantities)	1 1 2
1902: Success at Given an object in motion, ca	alculate its
Last MO SCI.7.2.1.A.c speed (distance/time)	la af acceptions
Recognize that different kind	•
suggest different kinds of sc	
investigations (e.g., some in	-
and describing objects organ	
some involve collecting spec	
involve experiments; some in observations in nature; some	
1902: Success at discovery of new objects and	
Last MO SCI.7.7.1.A.e some involve making models	•
Interpret a line graph represe	,
1903: Powered object's motion in terms of d	-
Flight MO SCI.7.2.1.A.d time (speed) using metric un	
Recognize that different kind	
suggest different kinds of sc	·
investigations (e.g., some in	
and describing objects organ	
some involve collecting spec	
involve experiments; some ii	
observations in nature; some	
1903: Powered discovery of new objects and	
Flight MO SCI.7.7.1.A.e some involve making models	•
1904: Improvement Given an object in motion, ca	
in Dayton MO SCI.7.2.1.A.c speed (distance/time)	
Identify and describe the ten	es of forces
Identify and describe the typ	n, at rest,
acting on an object in motion	force direction
<b>1</b>	ioroo, un collon,
acting on an object in motion floating/sinking (i.e., type of in Dayton MO SCI.7.2.2.A.a amount of force in Newtons)	
acting on an object in motion floating/sinking (i.e., type of to some state of the solution of	on an object by
acting on an object in motion floating/sinking (i.e., type of to amount of force in Newtons)  SCI.7.2.2.A.a amount of force in Newtons)  Compare the forces acting of using a spring scale to measuring a spring scale to measure.	on an object by
acting on an object in motion floating/sinking (i.e., type of to some state of the solution of	on an object by
acting on an object in motion floating/sinking (i.e., type of to amount of force in Newtons)  SCI.7.2.2.A.a amount of force in Newtons)  Compare the forces acting on an object in motion floating/sinking (i.e., type of to amount of force in Newtons)  Compare the forces acting on an object in motion floating/sinking (i.e., type of to amount of force in Newtons)  SCI.7.2.2.A.a mount of force in Newtons)  SCI.7.2.2.A.b nearest Newton	on an object by
acting on an object in motion floating/sinking (i.e., type of the force in Newtons)  1904: Improvement in Dayton  MO  SCI.7.2.2.A.a amount of force in Newtons)  Compare the forces acting on using a spring scale to meast using a spring scale to meast nearest Newton  Learning to Fly: The Wright Brother's Adventure	on an object by
acting on an object in motion floating/sinking (i.e., type of the force in Newtons)  SCI.7.2.2.A.a amount of force in Newtons)  Compare the forces acting on an object in motion floating/sinking (i.e., type of the force in Newtons)  Compare the forces acting on an object in motion floating/sinking (i.e., type of the force in Newtons)  SCI.7.2.2.A.a amount of force in Newtons)  Compare the forces acting on an object in motion floating/sinking (i.e., type of the force in Newtons)  SCI.7.2.2.A.a amount of force in Newtons)  Learning to Fly: The Wright Brother's Adventure  2008 Science	on an object by
acting on an object in motion floating/sinking (i.e., type of the force in Newtons)  MO SCI.7.2.2.A.a amount of force in Newtons)  Compare the forces acting on an object in motion floating/sinking (i.e., type of the force in Newtons)  Compare the forces acting on an object in motion floating/sinking (i.e., type of the floating/sinking (i.e., type of th	on an object by

Grade 8			
Activity/Lesson	State	Standards	
The Society	МО	SCI.8.7.1.A.e	Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)  Explain how technological improvements, such as those developed for use in space exploration, the military, or medicine, have led to the invention of new products that may improve lives here on Earth (e.g., new materials, freeze-dried foods, infrared
The Society	MO	SCI.8.8.1.A.a	goggles, Velcro, satellite imagery, robotics, lasers)
The Society	МО	SCI.8.8.2.A.a	Describe how the contributions of scientists and inventors, representing different cultures, races, and gender, have contributed to science, technology and human activity (e.g., George Washington Carver, Thomas Edison, Thomas Jefferson, Isaac Newton, Marie Curie, Galileo, Albert Einstein, Mae Jemison, Edwin Hubble, Charles Darwin, Jonas Salk, Louis Pasteur, Jane Goodall, Tom Akers, John Wesley Powell, Rachel Carson)
Meet the Wrights	МО	SCI.8.8.1.A.a	Explain how technological improvements, such as those developed for use in space exploration, the military, or medicine, have led to the invention of new products that may improve lives here on Earth (e.g., new materials, freeze-dried foods, infrared goggles, Velcro, satellite imagery, robotics, lasers)
Meet the Wrights	МО	SCI.8.8.2.A.a	Describe how the contributions of scientists and inventors, representing different cultures, races, and gender, have contributed to science, technology and human activity (e.g., George Washington Carver, Thomas Edison, Thomas Jefferson, Isaac Newton, Marie Curie, Galileo, Albert Einstein, Mae Jemison, Edwin Hubble, Charles Darwin, Jonas Salk, Louis Pasteur, Jane Goodall, Tom Akers, John Wesley Powell, Rachel Carson)

			Identify and describe the importance of the
			independent variable, dependent variables,
1901: The First			control of constants, and multiple trials to the
	МО	SCI.8.7.1.A.b	·
Improvement	IVIO	3C1.0.7.1.A.D	design of a valid experiment
			Recognize that different kinds of questions
			suggest different kinds of scientific
			investigations (e.g., some involve observing
			and describing objects organisms, or events;
			some involve collecting specimens; some
			involve experiments; some involve making
			observations in nature; some involve
1901: The First			discovery of new objects and phenomena;
Improvement	MO	SCI.8.7.1.A.e	some involve making models)
			Identify and describe the importance of the
			independent variable, dependent variables,
			control of constants, and multiple trials to the
New Data	MO	SCI.8.7.1.A.b	design of a valid experiment
			Recognize that different kinds of questions
			suggest different kinds of scientific
			investigations (e.g., some involve observing
			and describing objects organisms, or events;
			some involve collecting specimens; some
			involve experiments; some involve making
			observations in nature; some involve
			discovery of new objects and phenomena;
New Data	MO	SCI.8.7.1.A.e	some involve making models)
			data tables (allowing for the recording and
			analysis of data relevant to the experiment,
			such as independent and dependent
			variables, multiple trials, beginning and
			ending times or temperatures, derived
New Data	МО	SCI.8.7.1.D.a.3	
			Recognize that different kinds of questions
			suggest different kinds of scientific
			investigations (e.g., some involve observing
			and describing objects organisms, or events;
			some involve collecting specimens; some
			involve experiments; some involve making
			observations in nature; some involve
1902: Success at			discovery of new objects and phenomena;
Last	МО	SCI.8.7.1.A.e	some involve making models)
Last	IVIO	001.0.7.1.7.0	Recognize that different kinds of questions
			suggest different kinds of scientific
			investigations (e.g., some involve observing
			and describing objects organisms, or events;
			some involve collecting specimens; some
			involve experiments; some involve making
			observations in nature; some involve
1003: Bowered			
1903: Powered	MO	CCI 0 7 4 A -	discovery of new objects and phenomena;
Flight	MO	SCI.8.7.1.A.e	some involve making models)

			Use a variety of tools and equipment to
			gather data (e.g., microscopes,
			thermometers, analog and digital meters,
1903: Powered			computers, spring scales, balances, metric
Flight	MO	SCI.8.7.1.B.c	rulers, graduated cylinders, stopwatches)